Roy F Weston, Inc.
Suite 5700
700 5th Avenue
Seattle, Washington 98104-5057
206-521-7600 • Fax 206-521-7601

MEMORANDUM

DATE. 1 December 1998

TO: David Bennett, WAM, U S EPA, Region X

FROM: Michelle Turner, Chemist, WESTON, Seattle
Roger McGinnis, Senior Environmental Chemist, WESTON, Seattle

SUBJECT: Validation of Total Organic Carbon Analysis Results
Laboratory Batch K9805547
Site: Duwamish River

WORK ASSIGNMENT NO.: 46-23-0JZZ

WORK ORDER NO.: 4000-019-038-5200-00

DOC. CONTROL NO. 4000-019-038-AAAK

cc: Bruce Woods, RAP-WAM, U S EPA, Region X
Dena Hughes, Site Manager, WESTON, Seattle (memo only)
Kevin Mundell-Jackson, Database Management, WESTON

The quality assurance review of twelve sediment samples, laboratory batch K9805547, collected from the Duwamish River has been completed. The sediment samples were analyzed for total organic carbon (TOC) using EPA Method 9060 by Columbia Analytical Services of Kelso,WA. The samples were numbered:

98344010	98344011	98344012	98344013	98344014
98344015	98344016	98344017	98344018	98344019
98344020	98344021			

Data Qualifications

The following comments refer to the laboratory performance in meeting the quality control specifications described in the technical specifications of the laboratory subcontract.

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

1 Holding Times

All samples were cooled with ice or refrigerated from the time of collection until analysis. A maximum holding time of 14 days was specified in the Duwamish River Sampling and Analysis Plan. All TOC analyses were performed within 11 days of sample collection

2. Instrument Detection Limits

All laboratory reporting limits are equal to or less than the project-required detection limits of 200 mg/kg.

3. Initial Calibration

A calibration verification check was analyzed prior to sample analysis. Results met control limits of 90 to 110 percent recovery of the true value.

4 Continuing Calibration Verification

Continuing calibration checks were performed initially and after every 10 samples Results for all continuing calibration checks met control limits of 90 to 110 percent recovery of the true value

5. Laboratory Method Blanks

Laboratory method blanks were prepared and analyzed with each batch of samples. No analytes were detected above the project-required detection limit in laboratory method blanks

6. Laboratory Control Sample

The recoveries for TOC were within the control limits of 80 to 120 percent.

7. Laboratory Duplicate Sample Analysis

No replicate analysis was analyzed for this SDG.

8. Matrix Spike Analysis

Matrix spike recoveries for all analytes met QC criteria of 70 to 130 percent.

This document was prepared by Roy F Weston, Inc expressly for the EPA. It shall not be disclosed in whole or in part without the express, written permission of the EPA

9 Field Duplicate Analysis

No field duplicates were included in this SDG.

10. Sample Analysis

A cursory review of raw data was performed No problems were noted. Triplicate analyses were not performed for this SDG.

11. Laboratory Contact

No laboratory contract was required

Data Assessment

Upon consideration of the data qualifications noted above, the data are ACCEPTABLE for use except where flagged with data qualifiers that modify the usefulness of the individual values.

Data Qualifiers

U - The material was analyzed for, but was not detected

UJ - The analyte was not detected. The associated quantitation limit is an estimate because quality control criteria were not met

J - The analyte was positively identified, but the associated numerical value is an estimated quantity because quality control criteria were not met or because concentrations reported were less than the quantitation limit or lowest calibration standard

R - Quality control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.

This document was prepared by Roy F Weston, Inc expressly for the EPA It shall not be disclosed in whole or in part without the express, written permission of the EPA

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Roy F Weston, Inc	**Service Request:**	K9805547
Project:	Duwamish River/4000-027-001-2019-38	**Date Collected:**	8/17/98
Sample Matrix:	Sediment	**Date Received:**	8/18/98

Carbon, Total Organic

Prep Method	NONE	Units	PERCENT
Analysis Method	9060M	Basis	Dry
Test Notes			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
98344010	K9805547-001	0 05	0 006	1	NA	8/28/98	2 62	
98344011	K9805547-002	0 05	0 006	1	NA	8/28/98	2 51	
98344012	K9805547-003	0 05	0 006	1	NA	8/28/98	2 83	
98344013	K9805547-004	0 05	0 006	1	NA	8/28/98	3 24	
98344014	K9805547-005	0 05	0 006	1	NA	8/28/98	2 49	
98344015	K9805547-006	0 05	0 006	1	NA	8/28/98	2 43	
98344016	K9805547-007	0 05	0 006	1	NA	8/28/98	2 58	
98344017	K9805547-008	0 05	0 006	1	NA	8/28/98	2 41	
98344018	K9805547-009	0 05	0 006	1	NA	8/28/98	2 78	
98344019	K9805547-010	0 05	0 006	1	NA	8/28/98	1 84	
98344020	K9805547-011	0 05	0 006	1	NA	8/28/98	2 55	
98344021	K9805547-012	0 05	0 006	1	NA	8/28/98	2 46	
~~Method Blank~~	~~K9805547-MB~~	~~0 05~~	~~0 006~~	~~1~~	NA	~~8/28/98~~	~~ND~~	

M Modified

Approved By _____ Date 9/2/98

1A/020597p

05547WET LJ1 - Sample 9/2/98